Test Report

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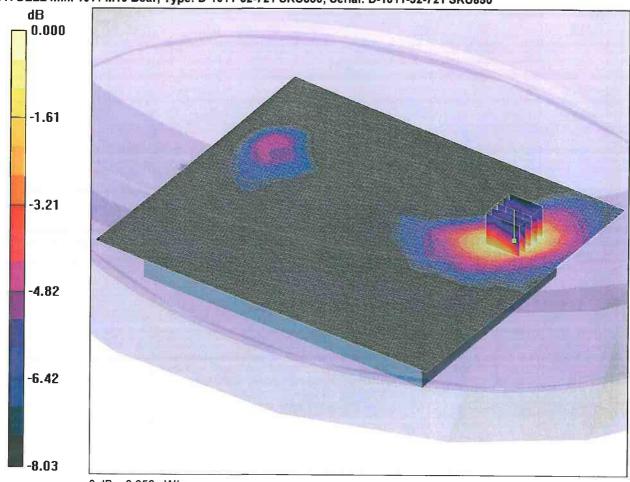
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/006: Base of EUT Facing Phantom UMTS FDD V + HSDPA CH4183

Date: 08/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



0 dB = 0.056 mW/g

Communication System: UMTS-FDD V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used (interpolated): f = 836.6 MHz; $\sigma = 0.958$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³ Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(9.99, 9.99, 9.99); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (181x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.055 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 3.14 V/m; Power Drift = -0.397 dB Peak SAR (extrapolated) = 0.075 W/kg

SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.056 mW/g

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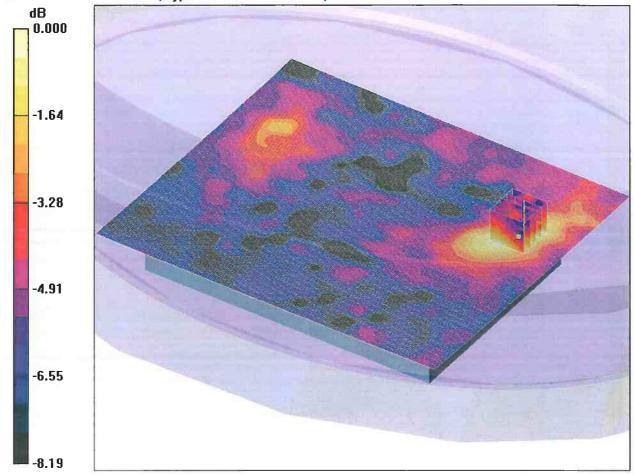
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/007: Base of EUT Facing Phantom UMTS FDD V + HSPA CH4183

Date: 08/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



0 dB = 0.019 mW/g

Communication System: UMTS-FDD V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used (interpolated): f = 836.6 MHz; $\sigma = 0.958$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(9.99, 9.99, 9.99); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle 2/Area Scan (181x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.018 mW/g

Base of EUT Facing Phantom - Middle 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.48 V/m; Power Drift = -0.426 dB

Peak SAR (extrapolated) = 0.027 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.019 mW/g

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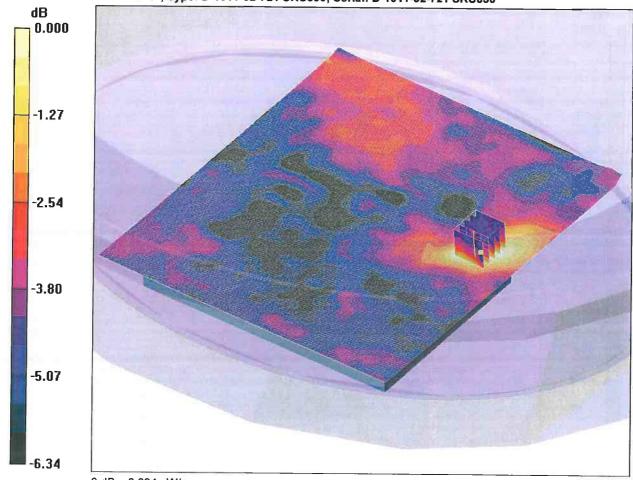
Test of: **Dell Inspiron 1011 Netbook PC**

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/008: Base of EUT Facing Phantom UMTS FDD II CH9400

Date: 09/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



0 dB = 0.034 mW/g

Communication System: UMTS-FDD II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used (interpolated): f = 1880 MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified

- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle 2/Area Scan (231x211x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.038 mW/g

Base of EUT Facing Phantom - Middle 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.45 V/m; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 0.046 W/kg

SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.024 mW/gMaximum value of SAR (measured) = 0.034 mW/a

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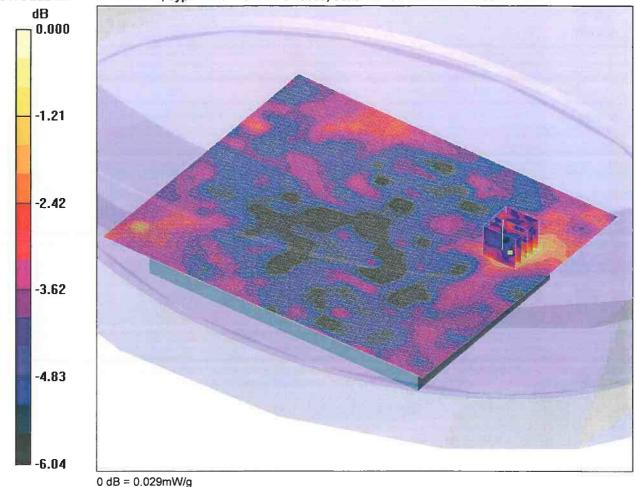
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/009: Base of EUT Facing Phantom UMTS FDD II + HSPA CH9400

Date: 09/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



Communication System: UMTS-FDD II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used (interpolated): f = 1880 MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (181x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.028 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.24 V/m; Power Drift = 0.305 dB

Peak SAR (extrapolated) = 0.046 W/kg

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.029 mW/g

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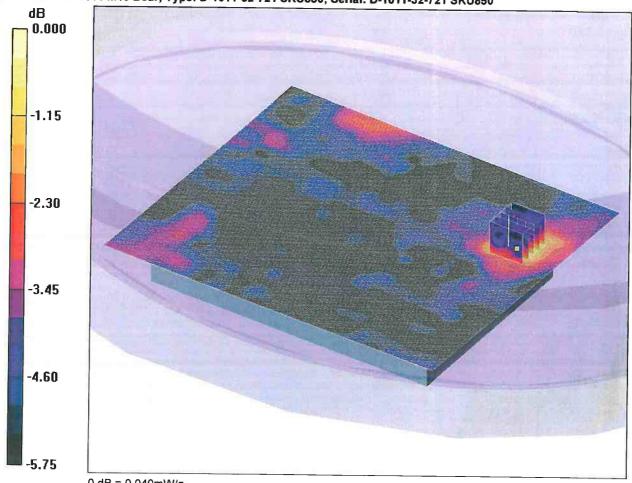
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/010: Base of EUT Facing Phantom UMTS FDD II + HSDPA CH9400

Date: 09/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



0 dB = 0.040 mW/g

Communication System: UMTS-FDD II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used (interpolated): f = 1880 MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (181x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.042 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.70 V/m; Power Drift = 0.137 dB

Peak SAR (extrapolated) = 0.059 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.040 mW/g

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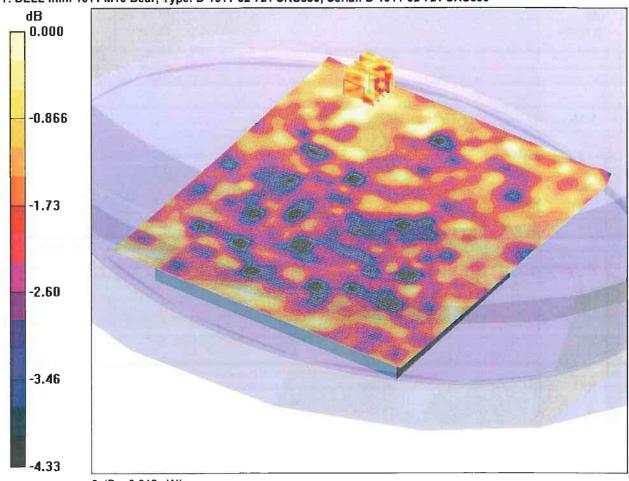
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/011: Base of EUT SKU-900 Facing Phantom UMTS FDD II CH9400

Date: 17/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



0 dB = 0.012 mW/g

Communication System: UMTS-FDD II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used (interpolated): f = 1880 MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³ Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle 2/Area Scan (231x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.013 mW/g

Base of EUT Facing Phantom - Middle 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.02 V/m; Power Drift = 0.302 dB

Peak SAR (extrapolated) = 0.015 W/kg

SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00973 mW/g

Maximum value of SAR (measured) = 0.012 mW/g

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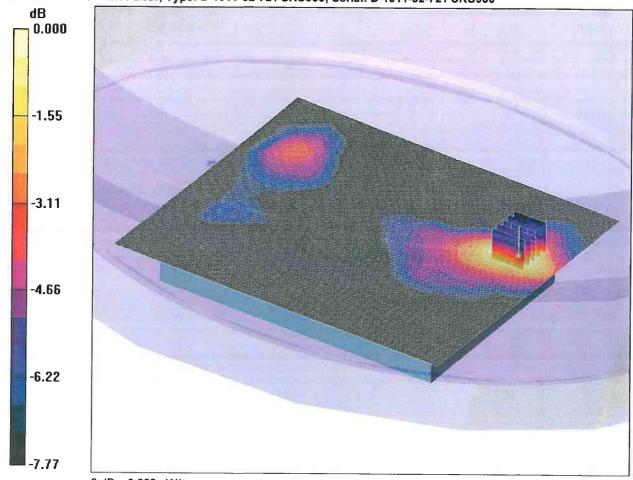
Test of: **Dell Inspiron 1011 Netbook PC**

To: **OET Bulletin 65 Supplement C: (2001-01)**

SCN/75258JD01/012: Base of EUT SKU-900 Facing Phantom GPRS CH189

Date: 20/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.062 mW/g

Communication System: GPRS 850 MHz; Frequency: 836.4 MHz; Duty Cycle: 1:4

Medium: 900 MHz MSL Medium parameters used (interpolated): f = 836.4 MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³ Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(9.99, 9.99, 9.99); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (181x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.061 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 3.48 V/m; Power Drift = 0.275 dB Peak SAR (extrapolated) = 0.075 W/kg

SAR(1 g) = 0.058 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.062 mW/g

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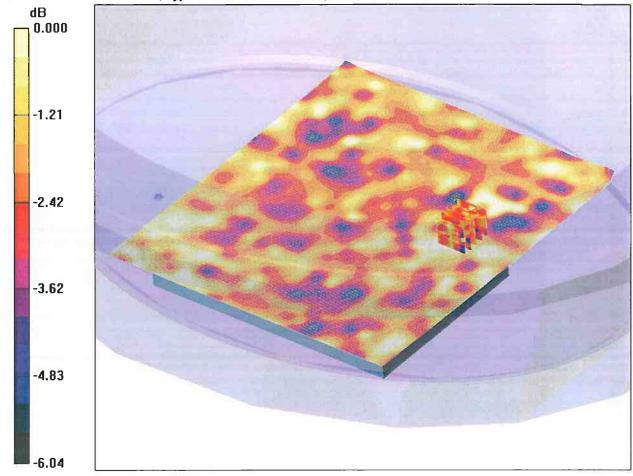
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/013: Base of EUT SKU-900 Facing Phantom GPRS CH660

Date: 17/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU850; Serial: D-1011-32-721 SKU850



0 dB = 0.012 mW/g

Communication System: GPRS 1900; Frequency: 1879.8 MHz;Duty Cycle: 1:4

Medium: 1900 MHz MSL Medium parameters used (interpolated): f = 1879.8 MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle 2/Area Scan (231x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.015 mW/g

Base of EUT Facing Phantom - Middle 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.99 V/m; Power Drift = -0.131 dB

Peak SAR (extrapolated) = 0.023 W/kg

SAR(1 g) = 0.00852 mW/g; SAR(10 g) = 0.00727 mW/g

Maximum value of SAR (measured) = 0.012 mW/g

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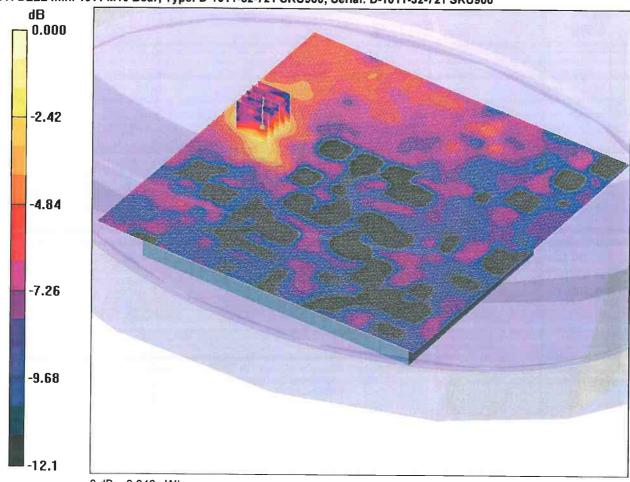
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/014: Base of EUT Facing Phantom WiFi 802_11b CH6 Dell 1397

Date: 23/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.046 mW/g

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.06, 8.06, 8.06); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.044 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.49 V/m; Power Drift = 2.05 dB

Peak SAR (extrapolated) = 0.079 W/kg

SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.024 mW/g

Maximum value of SAR (measured) = 0.046 mW/g

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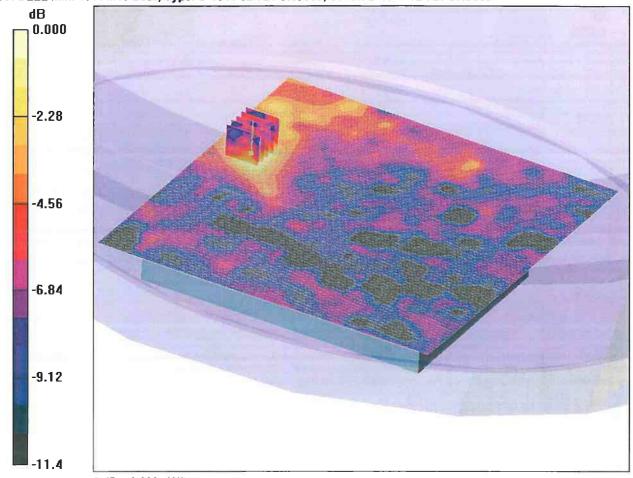
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/015: Base of EUT Facing Phantom WiFi 802_11g CH6 Dell 1397

Date: 23/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.039 mW/g

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.06, 8.06, 8.06); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.040 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.20 V/m; Power Drift = 0.203 dB

Peak SAR (extrapolated) = 0.069 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.023 mW/g

Maximum value of SAR (measured) = 0.039 mW/g

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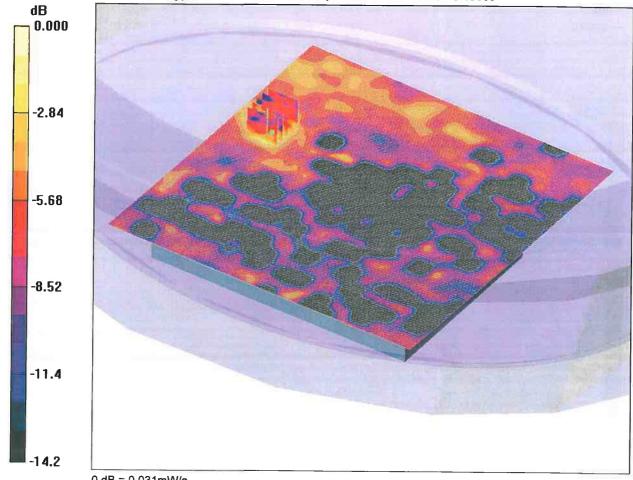
Test of: **Dell Inspiron 1011 Netbook PC**

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/016: Base of EUT Facing Phantom WiFi 802_11b CH6 Dell 1510

Date: 23/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.031 mW/g

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.06, 8.06, 8.06); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.031 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.38 V/m; Power Drift = 0.301 dB Peak SAR (extrapolated) = 0.102 W/kg

SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.017 mW/g

Maximum value of SAR (measured) = 0.031 mW/g

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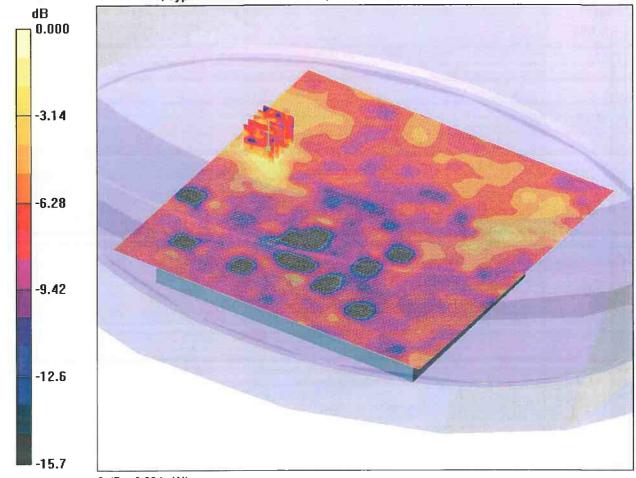
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/017: Base of EUT Facing Phantom WiFi 802_11n MIMO 20 MHz Channel CH6 Dell 1510

Date: 23/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.034 mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1

Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.06, 8.06, 8.06); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.025 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.38 V/m; Power Drift = 0.434 dB

Peak SAR (extrapolated) = 0.061 W/kg

SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.016 mW/g

Maximum value of SAR (measured) = 0.034 mW/g

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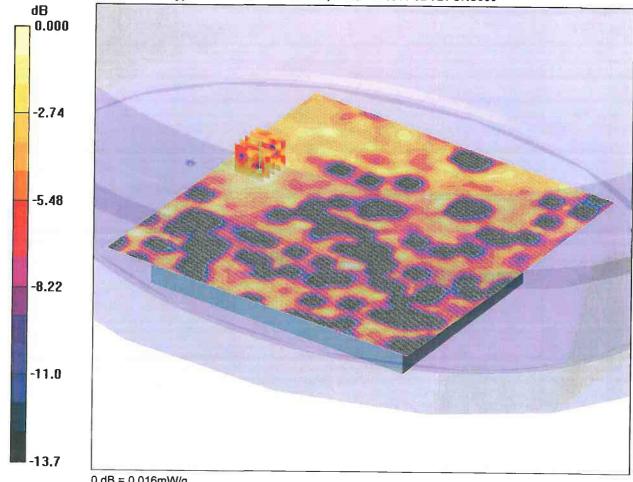
Test of: **Dell Inspiron 1011 Netbook PC**

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/018: Base of EUT Facing Phantom WiFi 802_11n MIMO 40 MHz Channel CH6 Dell 1510

Date: 23/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.016 mW/g

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ϵ_r = 51.1; ρ = 1000 kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.06, 8.06, 8.06); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.020 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.43 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 0.041 W/kg

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00987 mW/g

Maximum value of SAR (measured) = 0.016 mW/g

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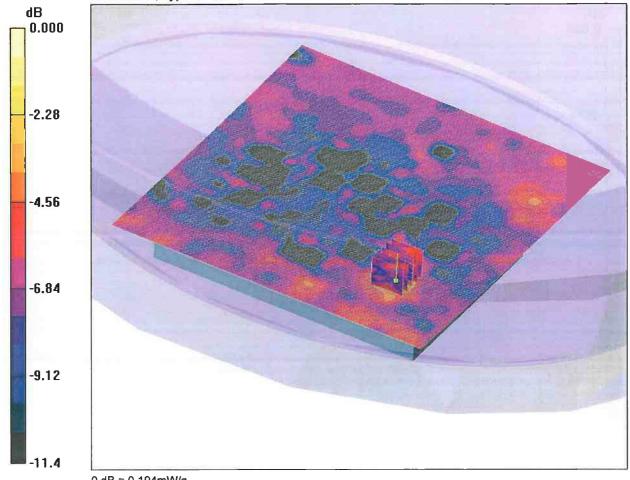
Test of: **Dell Inspiron 1011 Netbook PC**

To: **OET Bulletin 65 Supplement C: (2001-01)**

SCN/75258JD01/019: Base of EUT Facing Phantom WiFi 802_11a CH157 Dell 1510

Date: 24/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.194 mW/g

Communication System: WLAN; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: 5800 MHz MSL Medium parameters used (interpolated): f = 5785 MHz; $\sigma = 6.14$ mho/m; $\varepsilon_r = 47.5$; $\rho = 1000$ kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508add; ConvF(3.95, 3.95, 3.95); Calibrated: 16/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.155 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.10 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 0.417 W/kg

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.194 mW/g

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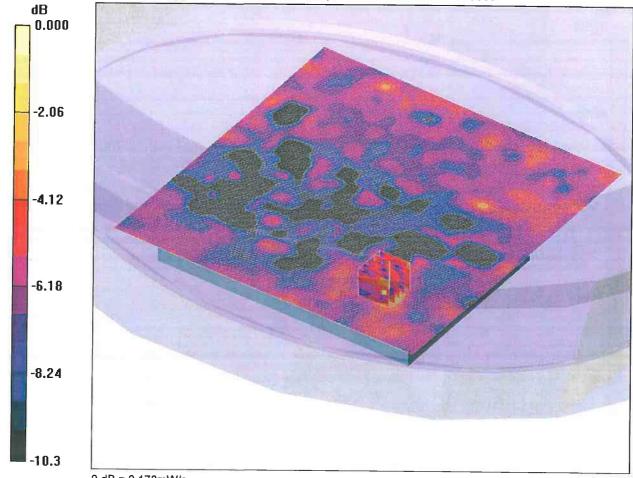
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/020: Base of EUT Facing Phantom WiFi 802_11n MIMO 20 MHz Channel CH157 Dell 1510

Date: 24/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.178 mW/g

Communication System: WLAN; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: 5800 MHz MSL Medium parameters used (interpolated): f = 5785 MHz; $\sigma = 6.14$ mho/m; $\epsilon_r = 47.5$; $\rho = 1000$ kg/m³ Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508add; ConvF(3.95, 3.95, 3.95); Calibrated: 16/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.188 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.05 V/m; Power Drift = 0.113 dB Peak SAR (extrapolated) = 0.308 W/kg

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.077 mW/g

Maximum value of SAR (measured) = 0.178 mW/g

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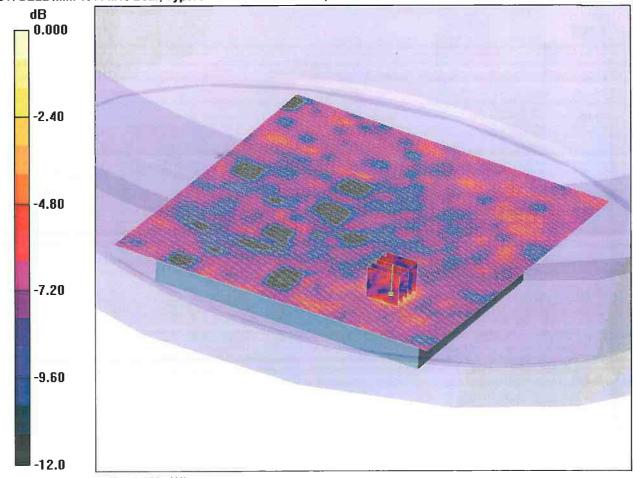
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/021: Base of EUT Facing Phantom WiFi 802_11n MIMO 40 MHz Channel CH159 Dell 1510

Date: 24/07/2009

DUT: DELL mini 1011 M10 Bear; Type: D-1011-32-721 SKU900; Serial: D-1011-32-721 SKU900



0 dB = 0.229 mW/g

Communication System: WLAN; Frequency: 5795 MHz; Duty Cycle: 1:1

Medium: 5800 MHz MSL Medium parameters used (interpolated): f = 5795 MHz; σ = 6.16 mho/m; ϵ_r = 47.5; ρ = 1000 kg/m³

Phantom section: basin Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508add; ConvF(3.95, 3.95, 3.95); Calibrated: 16/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: basin; Type: 3mm; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Base of EUT Facing Phantom - Middle/Area Scan (211x211x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.195 mW/g

Base of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 2.69 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.512 W/kg

SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.093 mW/g

Maximum value of SAR (measured) = 0.229 mW/g

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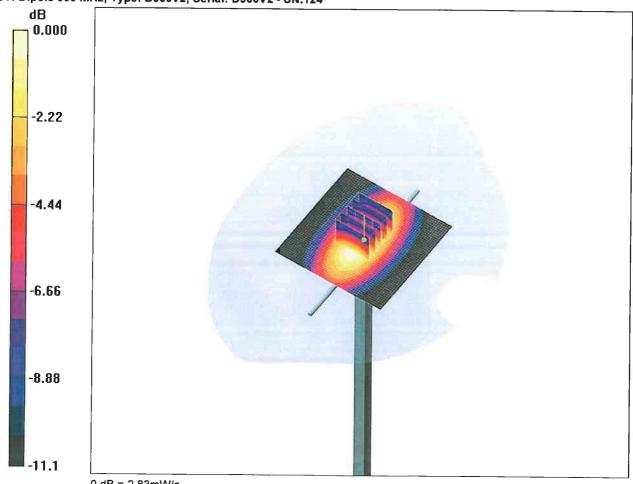
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/022: System Performance Check 900MHz Body 07 07 09

Date: 07/07/2009

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:124



0 dB = 2.83 mW/g

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.02 mho/m; ϵ_r = 53.7; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(9.99, 9.99, 9.99); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=15mm, **Pin=250mW/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 2.93 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 52.7 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 3.98 W/kg

SAR(1 g) = 2.64 mW/g; SAR(10 g) = 1.71 mW/g

Maximum value of SAR (measured) = 2.83 mW/g

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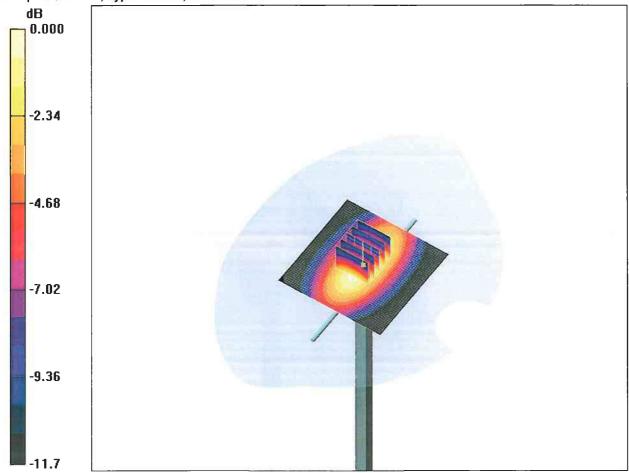
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/023: System Performance Check 900MHz Body 08 07 09

Date: 08/07/2009

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:124



0 dB = 2.80 mW/q

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; $\sigma = 1.02$ mho/m; $\varepsilon_r = 53.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(9.99, 9.99, 9.99); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 2.85 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 52.3 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 4.03 W/kg

SAR(1 g) = 2.6 mW/g; SAR(10 g) = 1.65 mW/g Maximum value of SAR (measured) = 2.80 mW/g

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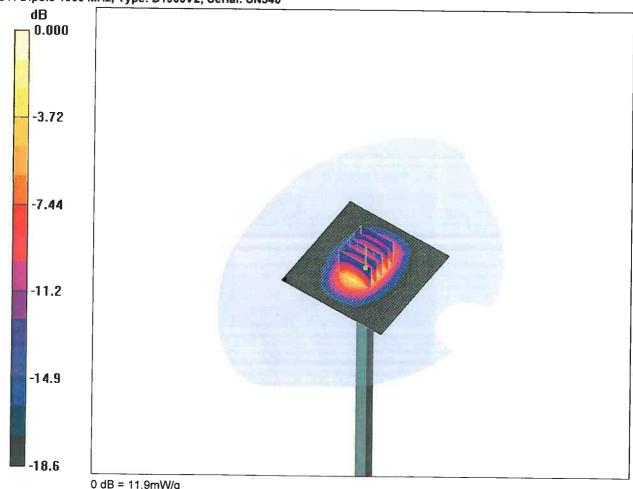
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/024: System Performance Check 1900MHz Body 09 07 09

Date: 09/07/2009

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540



Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz; σ = 1.6 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=10mm, **Pin=250mW/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 15.5 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 85.7 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 20.0 W/kg

SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.41 mW/g Maximum value of SAR (measured) = 11.9 mW/g

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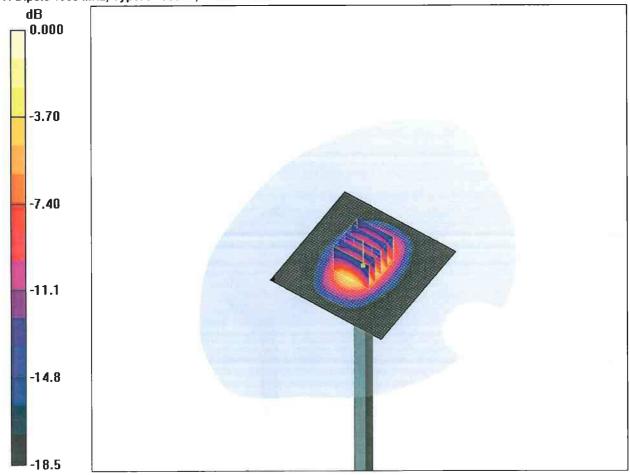
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/025: System Performance Check 1900MHz Body 10 07 09

Date: 10/07/2009

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540



0 dB = 12.0 mW/g

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz; $\sigma = 1.6$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 15.9 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 86.7 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 20.2 W/kg

SAR(1 g) = 10.7 mW/g; SAR(10 g) = 5.46 mW/g Maximum value of SAR (measured) = 12.0 mW/g

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Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/026: System Performance Check 1900MHz Body 17 07 09

Date: 17/07/2009

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540



Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 52.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.23, 8.23, 8.23); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 15.8 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 86.2 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 20.1 W/kg

SAR(1 g) = 10.7 mW/g; SAR(10 g) = 5.44 mW/g

Maximum value of SAR (measured) = 12.0 mW/g

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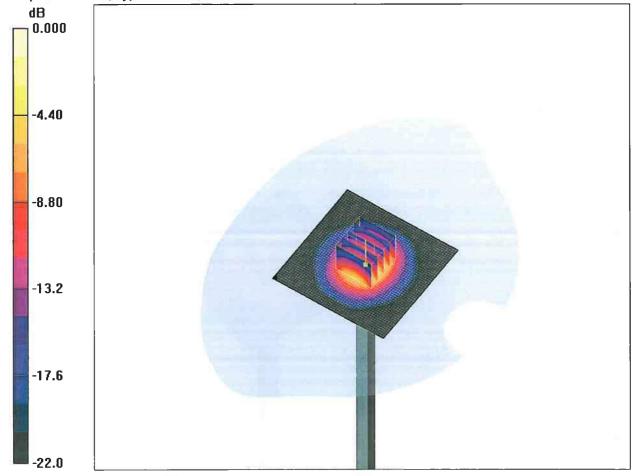
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/027: System Performance Check 2450MHz Body 23 07 09

Date: 23/07/2009

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 15.8 mW/q

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; $\sigma = 2.03$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 SN3508; ConvF(8.06, 8.06, 8.06); Calibrated: 26/06/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 30/04/2009
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

d=10mm, Pin=250mW 1/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 21.3 mW/g

d=10mm, Pin=250mW 1/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 87.7 V/m; Power Drift = 0.138 dB

Peak SAR (extrapolated) = 28.5 W/kg

SAR(1 g) = 13.8 mW/g; SAR(10 g) = 6.4 mW/g Maximum value of SAR (measured) = 15.8 mW/g

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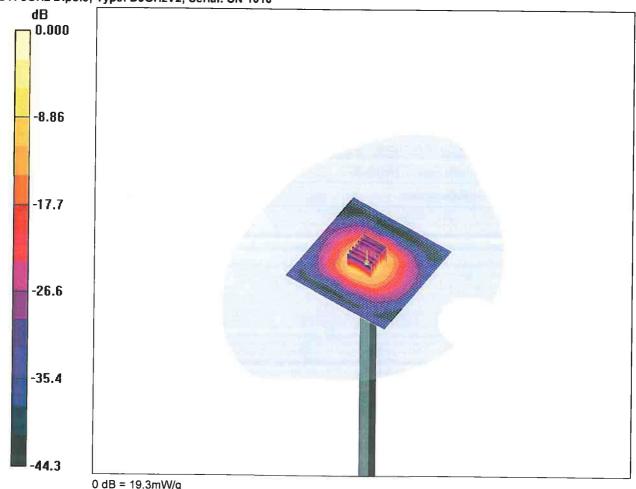
Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

SCN/75258JD01/028: System Performance Check 5800MHz Body 24 07 09

Date: 24/07/2009

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz MSL Medium parameters used: f = 5800 MHz; $\sigma = 6.17$ mho/m; $\epsilon_r = 47.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV3 - SN3508add; ConvF(3.95, 3.95, 3.95); Calibrated: 16/01/2009

- Sensor-Surface: 4mm (Mechanical Surface Detection)Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 30/04/2009

- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193

- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176 d=10mm, Pin=125mW 2 2/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 2.41 mW/g

d=10mm, Pin=125mW 2 2/Zoom Scan (7x7x9) (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 39.3 V/m; Power Drift = 0.263 dB

Peak SAR (extrapolated) = 38.9 W/kg

SAR(1 g) = 8.8 mW/g; SAR(10 g) = 2.46 mW/g Maximum value of SAR (measured) = 19.3 mW/g

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Appendix 4. Photographs

This appendix contains the following photographs:

Photo Reference Number	Title
PHT/75258JD01/001	Test configuration for the measurement of Specific Absorption Rate (SAR)
PHT/75258JD01/002	Base of Netbook Facing Phantom With Display at 90 Degrees to Keyboard
PHT/75258JD01/003	Rear of Netbook Display
PHT/75258JD01/004	Base of Netbook Display
PHT/75258JD01/005	Interview of Netbook
PHT/75258JD01/006	Battery view

Test Report

Serial No: RFI/SAR3/RP75258JD01A

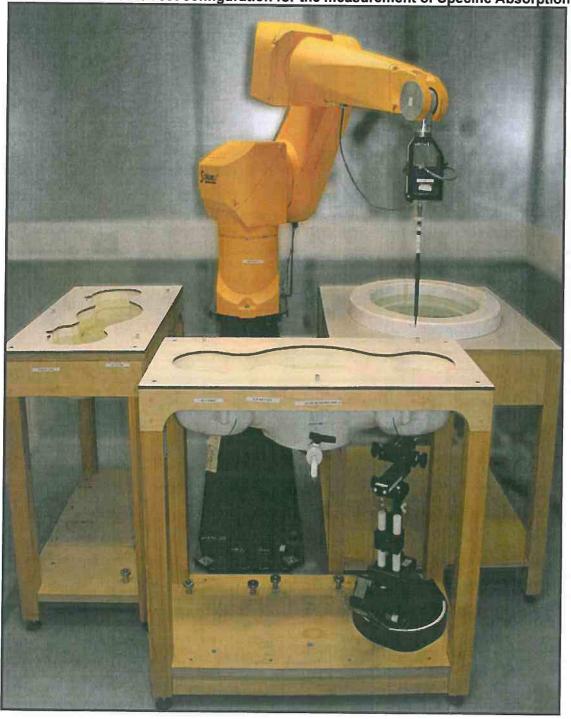
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Issue Date: 30 September 2009

Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

PHT/75258JD01/001: Test configuration for the measurement of Specific Absorption Rate (SAR)



Test Report

Serial No: RFI/SAR3/RP75258JD01A

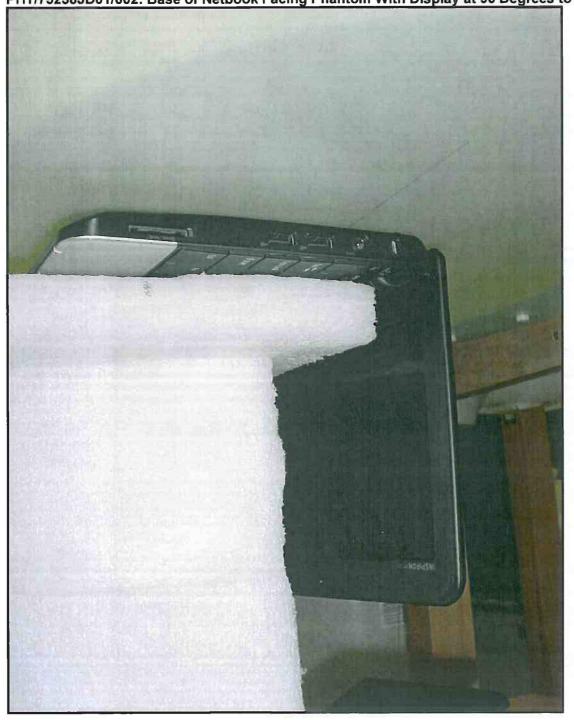
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Test of: Dell Inspiron 1011 Netbook PC

To: OET Bulletin 65 Supplement C: (2001-01)

PHT/75258JD01/002: Base of Netbook Facing Phantom With Display at 90 Degrees to Keyboard



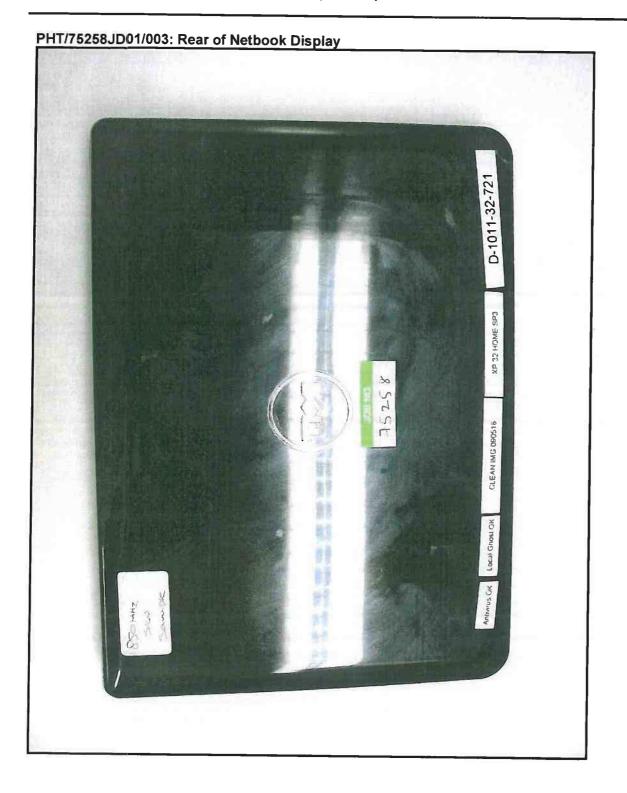
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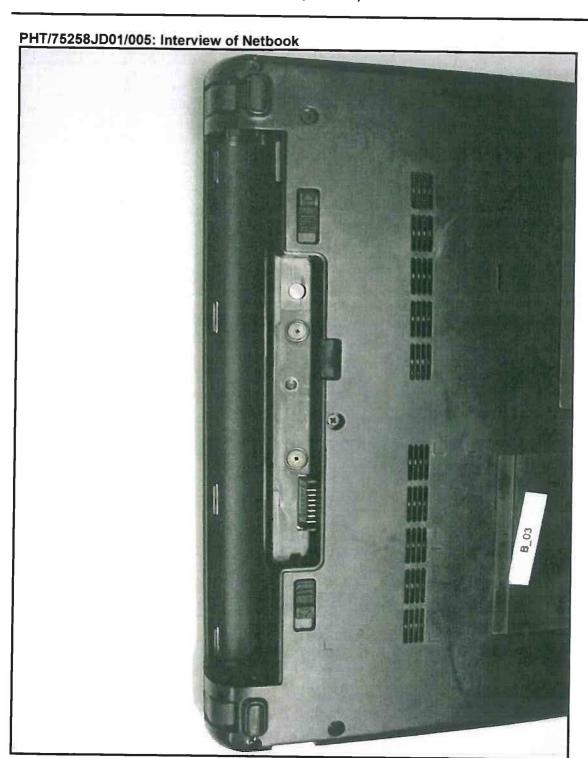
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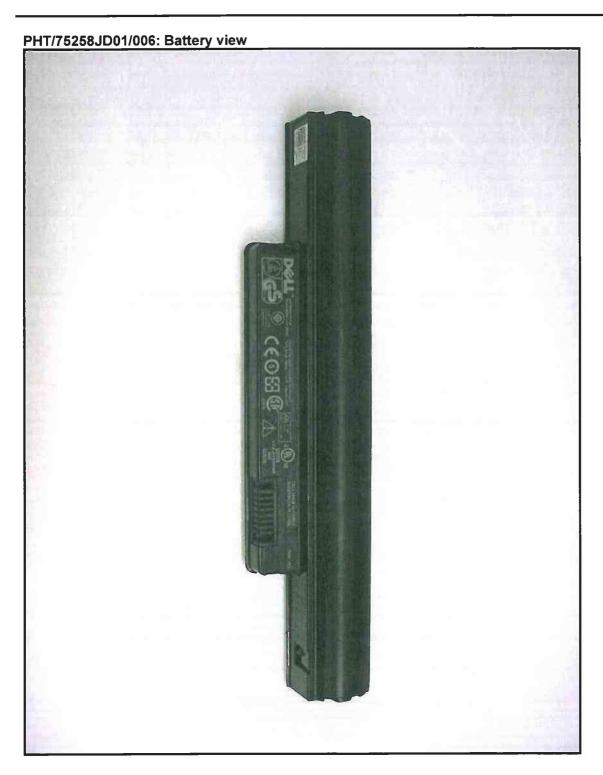
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Appendix 5. Validation of System

Prior to the assessment, the system was verified in the flat region of the phantom. A 900 MHz, 1900 MHz, 2450 MHz and 5800 MHz dipole was used. A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of $\pm 5\%$ for the 900 MHz, 1900 MHz, 2450 MHz and and forward power of 112 mW was applied to the dipole and the system was verified to a tolerance of $\pm 6\%$ for the 5800 MHz dipoles. The applicable verification (normalised to 1 Watt).

Date: 07/07/2009

Validation Dipole and Serial Number: D900V2 SN:124

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
				ε _r	55.00	53.74	-2.28	5.00
Body	900	23.0 ℃	22.9 °C	σ	1.05	1.02	-2.86	5.00
			1g SAR	10.50	10.56	0.57	5.00	
			10g SAR	6.89	6.84	-0.73	5.00	

Date: 08/07/2009

Validation Dipole and Serial Number: D900V2 SN:124

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
			23.0 °C	ε _r	55.00	53.74	-2.28	5.00
Body	ody 900 23.0 °C	23.0 °C		б	1.05	1.02	-2.86	5.00
,			1g SAR	10.50	10.40	-0.95	5.00	
				10g SAR	6.89	6.60	-4.21	5.00

Date: 20/07/2009

Validation Dipole and Serial Number: D900V2 SN:124

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
			23.0 °C	εΓ	55.00	53.10	-3.46	5.00
Body	900	23.0 °C		σ	1.05	1.03	-2.35	5.00
		2010	20.0	1g SAR	10.50	10.44	-0.57	5.00
				10g SAR	6.89	6.64	-3.63	5.00

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Test of: Dell Inspiron 1011 Netbook PC

To:

OET Bulletin 65 Supplement C: (2001-01)

Date: 09/07/2009

Validation Dipole and Serial Number: D1900V2:SN:540

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
		1900 23.0 °C		ϵ_{r}	53.30	53.25	-0.09	5.00
Body	1900		23.0 °C	σ	1.52	1.60	4.97	5.00
Body				1g SAR	40.90	42.40	3.67	5.00
				10g SAR	21.50	21.64	0.65	5.00

Date: 10/07/2009

Validation Dipole and Serial Number: D1900V2:SN:540

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
			23.0 °C	ε _ι	53.30	53.25	-0.09	5.00
Body	1900	23.0 °C		σ	1.52	1.60	4.97	5.00
Body	1300			1g SAR	40.90	42.80	4.65	5.00
				10g SAR	21.50	21.84	1.58	5.00

Date: 17/07/2009

Validation Dipole and Serial Number: D1900V2:SN:540

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
:			23.0 °C	ε _r	53.30	52.73	-1.06	5.00
Body	1900	00 23.0 °C		σ	1.52	1.59	4.55	5.00
Body	1300			1g SAR	40.90	42.80	4.65	5.00
				10g SAR	21.50	21.76	1.21	5.00

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Date: 23/07/2009

Validation Dipole and Serial Number: D2450V2:SN:725

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
	2450	23.0 °C	23.0 °C	ε _r	52.70	51.01	-3.22	5.00
Body				σ	1.95	2.00	2.80	5.00
,				1g SAR	53.30	55.20	3.56	5.00
				10g SAR	24.50	25.60	4.49	5.00

Date: 24/07/2009

Validation Dipole and Serial Number: D5GHzV2:SN:1016

Simulant	Frequency (MHz)	Room Temperature	Liquid Temperature	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
			23.0 °C	ε _r	48.20	47.45	-0.02	5.00
Body	5800	23.0 °C		σ	6.00	6.16	0.03	5.00
				1g SAR	67.90	70.40	3.68	5.00
				10g SAR	18.70	19.68	5.24	5.00

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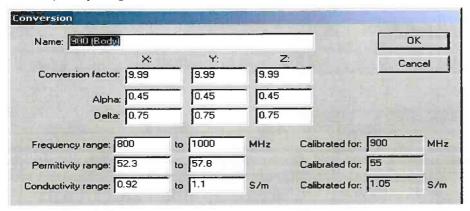
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Statement for 900MHz Dipole Validation and Probe

The test frequencies are properly matched as this is a cellular band. The probe calibration for permittivity and conductivity is within +/-5%, were the probe calibrated centre frequency at 900MHz has permittivity and conductivity of 55.0 and 1.05 respectively. At the probe extreme frequencies the following are true: at 800 MHz the permittivity and conductivity are 52.3 and 0.92 respectively. At 1000 MHz the permittivity and conductivity are 57.8 and 1.1 respectively. The probe was calibrated at these parameters in order to cover the frequency range 800 MHz to 1000 MHz.



The target permittivity and conductivity at 835 MHz is 55.2 and 0.97 respectively which is within the calibrated range of the probe parameter.

The following parameters are declared in the probe calibration certificate on pare 8:

f [MHz]	Validity [MHz] ^C	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
450	± 50 / ± 100	Head	43.5 ± 5%	0.87 ± 5%	0.23	1.00	10.49 ± 13.3% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	$0.97 \pm 5\%$	0.48	0.72	9.76 ± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.57	0.63	8.82 ± 11.0% (k=2)
1900	± 50 / ± 100	Head	$40.0 \pm 5\%$	1.40 ± 5%	0.53	0.65	8.58 ± 11.0% (k=2)
2150	± 50 / ± 101	Head	39.7 ± 5%	1.53 ± 5%	0.36	0.69	8.33 ± 11.0% (k=2)
2450	±50/±100	Head	39.2 ± 5%	1.80 ± 5%	0.36	0.75	7.77 ± 11.0% (k=2)
450	± 50 / ± 100	Body	56.7 ± 5%	$0.94 \pm 5\%$	0.30	0.51	11.32 ± 13.3% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	$1.05 \pm 5\%$	0.45	0.75	9.99 ± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.55	0.63	8.59 ± 11.0% (k=2)
1900	± 50 / ± 100	Body	$53.3 \pm 5\%$	$1.52 \pm 5\%$	0.48	0.68	8.23 ± 11.0% (k=2)
2150	± 50 / ± 100	Body	53.0 ± 5%	$1.75\pm5\%$	0.30	0.92	8.27 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.25	1.02	8.06 ± 11.0% (k=2)

^C The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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The system manufacturer has carried out addition steps as detailed on page 4 of KDB450824. This is detailed in the calibration certificates. The measured SAR values in the report are all below 10% of the SAR limit.

The measured fluid dielectric parameters for 835 MHz, performed during test values were all within \pm -5% of the 835 MHz Target value.

At 900 MHz were the probe was calibrated and validation performed, the tissue dielectric parameter measured for routine measurements at 900 MHz was less than the target parameter for 835 MHz ϵ and higher than the target parameter for 835 MHz σ .

	Measured Fluid Parameter Date: 08/12/2008		Measure Paramet	er Date:	Target / Nominal Fluid Parameter used by System manufacturer in cal certificate	
frequency(MHz)	3	σ	3	σ	ε	σ
800	54.72	0.92	54.15	0.93	52.30	0.92
805	54.67	0.93	54.10	0.93	52.71	0.93
810	54.62	0.93	54.04	0.94	53.13	0.93
815	54.57	0.94	53.99	0.94	53.54	0.94
820	54.52	0.94	53.93	0.95	53.96	0.95
825	54.48	0.95	53.88	0.95	54.37	0.96
830	54.43	0.95	53.82	0.96	54.79	0.96
835	54.38	0.96	53.77	0.96	55.20	0.97
840	54.33	0.96	53.71	0.97	55.18	0.98
845	54.28	0.97	53.66	0.97	55.17	0.98
850	54.23	0.97	53.60	0.98	55.15	0.99
900	53.74	1.02	53.10	1.03	55.00	1.05

Test Report

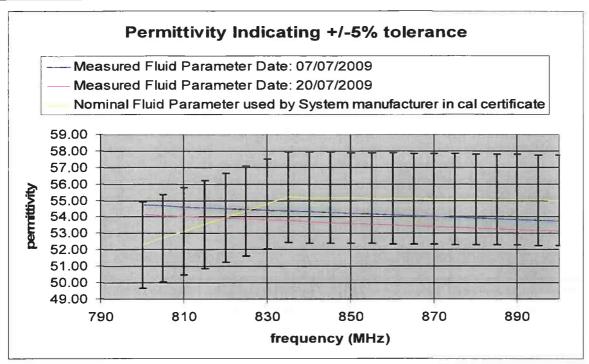
Serial No: RFI/SAR3/RP75258JD01A

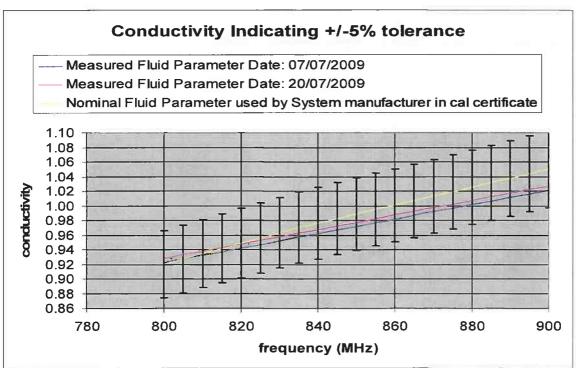
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The probe conversion factor and its frequency response, with respect to the tissue dielectric media used during the probe calibration and routine measurements was examined to determine if the effective frequency interval is adequate for the intended measurements to satisfy protocol requirements. The frequency range at which the probe is calibrated for at 900 MHz covered 800 MHz to 1000 MHz and the dielectric parameters required for 824 to 840 MHz were all within the calibrated range of the probe dielectric parameters.

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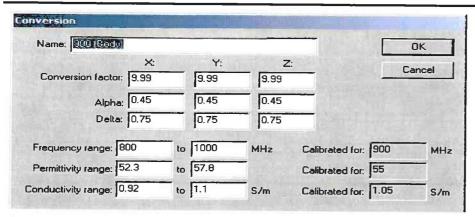
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Probe Tip to Sensor Center

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The measurement within the required frequency interval satisfy an expanded probe calibration uncertainty $(k=2) \le 15\%$ for all measurement conditions. Please refer to probe and dipole calibration certificates produce by the system manufacturer.

1.0 mm

Sensitivity in Tissue Simulating Liquid (Conversion Factors) Please see Page 8. **Boundary Effect** TSL 900 MHz Typical SAR gradient: 5 % per mm Sensor Center to Phantom Surface Distance 2.0 mm 3.0 mm SAR_{be} [%] Without Correction Algorithm 7.8 4.6 SAR .. [%] With Correction Algorithm 0.5 0.3 TSL 1750 MHz Typical SAR gradient: 10 % per mm Sensor Center to Phantom Surface Distance 2.0 mm 3.0 mm SAR .. [%] Without Correction Algorithm 5.8 2.7 SAR [%] With Correction Algorithm 0.7 0.5 Sensor Offset

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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Appendix 6. Simulated Tissues

The body mixture consists of water and glycol. Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

Ingredient	Frequency	
	5200 - 5800 MHz Body	
Diethylenglycol Monohexylether (DEME)	78.67%	
De-Ionised Water	10.665%	
Triton X-100	10.665%	

Ingredient	Frequency	
	2450 MHz Body	
De-Ionised Water	68.64	
Diglycol Butyl Ether (DGBE)	31.37	

Ingredient	Frequency	
	1800/1900 MHz Body	
De-Ionised Water	69.79%	
Diglycol Butyl Ether (DGBE)	30.00%	
Salt	0.20%	

Ingredient	Frequency 835/850/900 MHz Body	
		_
De-Ionised Water	50.75%	
Sugar	48.21%	
Salt	0.94%	
Kathon	0.10%	

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Appendix 7. DASY4 System Details

A.7.1. DASY4 SAR Measurement System

RFI Global Services Ltd, SAR measurement facility utilises the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 system is comprised of the robot controller, computer, near-field probe, probe alignment sensor, and the SAM phantom containing brain or muscle equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller; teach pendant (Joystick), and remote control. This is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. The data acquisition electronics (DAE) performs signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection etc. The DAE is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card. The DAE3 utilises a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching mulitplexer, a fast 16-bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

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A.7.2. DASY4 SAR System Specifications

Robot System

Positioner:	Stäubli Unimation Corp. Robot Model: RX90L
Repeatability:	0.025 mm
No. of Axis:	6
Serial Number:	F00/SD89A1/A/01
Reach:	1185 mm
Payload:	3.5 kg
Control Unit:	CS7
Programming Language:	V+

Data Acquisition Electronic (DAE) System

Serial Number:	DAE3 SN:450
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PC Controller

PC:	Dell Precision 340
Operating System:	Windows 2000
Data Card:	DASY4 Measurement Server
Serial Number:	1080

Data Converter

Features:	Signal Amplifier, multiplexer, A/D converted and control logic.
Software:	DASY4 Software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock.

PC Interface Card

Function:	24 bit (64 MHz) DSP for real time processing Link to DAE3 16 nit A/D converter for surface detection system serial link to robot direct emergency stop output for robot.
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DASY4 SAR System Specifications (Continued)

E-Field Probe

Model:	EX3DV3	
Serial No:	3508	_
Construction:	Triangular core	
Frequency:	10 MHz to >6 GHz	
Linearity:	±0.2 dB (30 MHz to 6 GHz)	
Probe Length (mm):	330	
Probe Diameter (mm):	12	
Tip Length (mm):	20	
Tip Diameter (mm):	2.5	
Sensor X Offset (mm):	1	
Sensor Y Offset (mm):	1	
Sensor Z Offset (mm):	1	-

Phantom

Phantom:	OVAL Phantom
Shell Material:	Fibreglass
Thickness:	2.0 ±0.1 mm

